This listing of the claims replaces any and all prior versions and listings of claims in the application:

LISTING OF THE CLAIMS

1 (Currently amended): A method for producing a transducer slider having at least one tapered edge, comprising:

(a) coating a substrate with a radiation-sensitive layer;

(b) imagewise exposing the radiation-sensitive layer to radiation according to an intensity pattern having a gradient conforming to said at least one tapered edge, said intensity pattern enabling specific levels of removal of portions of the radiation sensitive layer corresponding to the specific intensity pattern used;

(c) developing the image into the radiation-sensitive layer; and

(d) transferring the image into the substrate to form a transducer slider having a surface profile comprising said at least one tapered edge and a predetermined surface profile as provided by the specific intensity pattern used, wherein the predetermined surface profile contains no exposed sharp edge which might contact a disk surface when the transducer slider is in use.

2 (Previously presented): The method of claim 1, wherein the radiation-sensitive composition is spin coated on the substrate.

3 (Previously presented): The method of claim 2, wherein heat is applied to the radiation-sensitive layer after (a) and before (b).

4 (Previously presented): The method of claim 3, wherein the application of heat results in solvent evaporation from the radiation-sensitive layer.

5 (Original): The method of claim 1, wherein the radiation-sensitive layer is a positive resist.

6 (Original): The method of claim 1, wherein the radiation-sensitive layer is a low contrast resist.

7 (Original): The method of claim 1, wherein the radiation-sensitive layer has a thickness of about 1 to about 20 μm.

8 (Original): The method of claim 7, wherein the radiation-sensitive layer has a thickness of about 2 to about 10 μm.

9 (Currently amended): The method of claim 1 wherein the radiation is photonic.

10 (Original): The method of claim 1, wherein the radiation has an ultraviolet wavelength.

11 (Original): The method of claim 1, wherein the intensity pattern is provided using a grayscale mask.

12 (Original): The method of claim 11, wherein the patterned grayscale mask is electron-beam sensitive.

13 (Original): The method of claim 12, wherein the tapered edge corresponds to a portion of the patterned gray scale mask that has not been exposed to an electron beam.

14 (Previously presented): The method of claim 1, wherein a solvent is applied to the radiation-sensitive layer after (b) and before (c).

15 (Previously presented): The method of claim 14, wherein the image is developed into the exposed portion of the radiation-sensitive layer by the solvent during (c).

16 (Previously presented): The method of claim 1, wherein the substrate is exposed to an etchant during (c).

17 (Original): The method of claim 16, wherein the etchant comprises a gas.

18 (Original): The method of claim 17, wherein the gas comprises plasma.

19 (Original): The method of claim 18, wherein the plasma is argon based.

20 (Original): The method of claim 16, wherein the etchant comprises a liquid.

21 (Original): The method of claim 15, wherein the etchant is an isotropic etchant.

22 (Previously presented): The method of claim 1, wherein simultaneous removal of the patterned layer is carried out during (d).

23 (Original): The method of claim 1, wherein the substrate comprises a ceramic material.

24 (Original): The method of claim 23, wherein the ceramic material comprises carbide.

25 (Original): The method of claim 24, wherein the carbide is selected from the group consisting of aluminum carbide, silicon carbide, titanium carbide, boron carbide, geranium carbide, tungsten carbide, and mixed-metal carbide.

26 (Original): The method of claim 23, wherein the ceramic material comprises a nitride.

27 (Original): The method of claim 23, wherein the ceramic material comprises an oxide.

28 (Withdrawn): A structure for forming a transducer slider, comprising a substrate and a patterned layer thereon having a tapered edge, wherein the patterned layer corresponds to a predetermined transducer slider surface profile.

29 (Withdrawn): The structure of claim 28, wherein the patterned layer is polymeric.

30 (Withdrawn): The structure of claim 29, wherein the patterned layer comprises substantially unexposed resist.

31 (Withdrawn): The structure of claim 28, wherein the predetermined transducer slider surface profile contains no exposed sharp edge.

32 (Withdrawn): The structure of claim 28, wherein the predetermined transducer slider surface profile contains two portions that intersect at an angle of about 0.5 to about 10 degrees.

33 (Withdrawn): The structure of claim 32, wherein the angle from about 1 to about 5 degrees.

34 (Withdrawn): A method for producing a plurality of transducer sliders, comprising:

(a) coating a substrate with a photosensitive layer;

(b) exposing the photosensitive layer to curing radiation according to a patterned grayscale mask to convert the photosensitive layer into a patterned layer having a tapered edge;

(c) removing material from the substrate according to the patterned layer to form a surface profile comprising a tapered edge that corresponds to the tapered edge of the patterned layer; and

(d) sectioning the substrate into a plurality of transducer sliders.

35 (Withdrawn): The method of claim 34, wherein the substrate is assembled from a plurality of components before (a) that will represent the plurality of transducer sliders after (d).

36 (Withdrawn): The method of claim 35, wherein the plurality of components are substantially identical.

37 (Withdrawn): The method of claim 36, wherein the plurality of components are assembled in an array.

38 (Withdrawn): The method of claim 37, wherein the array is rectilinear.

39 (Withdrawn): The method of claim 35, wherein a monolithic solid member is cut into the plurality of components before (a).

40 (Previously presented): A method for producing a transducer slider having at least one rounded corner, comprising:

(a) coating a substrate with a radiation-sensitive layer;

(b) imagewise exposing the radiation-sensitive layer to radiation according to an intensity pattern having a gradient conforming to said at least one rounded corner, said intensity pattern enabling specific levels of removal of portions of the radiation sensitive layer corresponding to the specific intensity pattern used;

(c) developing the image into the radiation-sensitive layer; and

(d) transferring the image into the substrate to form a transducer slider having a surface profile comprising said at least one rounded corner as provided by the specific intensity pattern used.

41 (New). The method of claim 16, wherein the intensity pattern's relationship to the predetermined surface profile has been determined by using the equations $t = (1-0.7\beta)D/K$ and $\alpha = \arctan K$, where t is the thickness of the radiation-sensitive layer at an edge of a mass of that layer, α is the taper angle of the radiation-sensitive layer, D is the etch depth resulting from exposure to the etchant, β is the ratio of taper length L of the etch profile over D, and K is the ratio of etch rate over substrate etch rate.